

ST MARY'S CE PRIMARY SCHOOL CUMPUTING CURRICULUM POLICY



CONTENTS		
1.	Introduction	Page 1
2.	Aims	Page 1
3.	Rationale	Page 2
4.	Legislation and Guidance	Page 2
5.	Roles and Responsibilities	Page 2
6.	Intent	Page 3
7.	Implementation	Page 4
8.	Inclusion	Page 6
9.	Monitoring	Page 6
10.	Impact	Page 7
11.	Policies	Page 7

1. Introduction

The use of computers and computer systems is an integral part of the National Curriculum and knowing how they work is a key life skill. In an increasingly digital world there now exists a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas and create digital content. At St Mary's CE Primary School we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, approach to the learning how computer systems work, the use of IT and the skills necessary to become digitally literate and participate fully in the modern world. The purpose of this policy is to state how the school intends to make this provision.

2. Aims

The school's aims are to:

- Provide a broad, balanced, challenging and enjoyable curriculum for all pupils.
- Develop pupil's computational thinking skills that will benefit them throughout their lives.
- Meet the requirements of the national curriculum programmes of study for Computing at Key Stage 1 and 2
- To respond to new developments in technology
- To equip pupils with the confidence and skills to use digital tools and technologies throughout their lives.
- To enhance and enrich learning in other areas of the curriculum using IT and computing.
- To develop the understanding of how to use computers and digital tools safely and responsibly

The National Curriculum for Computing aims to ensure that all pupils:

- can understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- are responsible, competent, confident and creative users of information and communication technology.

3. Rationale

The school believes that IT, computer science and digital literacy:

- are essential life skills necessary to fully participate in the modern digital world.
- allows children to become creators of digital content rather than simply consumers of it.
- provides access to a rich and varied source of information and content.
- communicates and presents information in new ways, which helps pupils understand, access and use it more readily.
- can motivate and enthuse pupils.
- offers opportunities for communication and collaboration through group working
- has the flexibility to meet the individual needs and abilities of each pupil.

4. LEGISLATION AND GUIDANCE

This policy reflects the requirements of the [National Curriculum programmes of study](#), which all maintained schools in England must teach. It also reflects requirements for inclusion and equality as set out in the [Special Educational Needs and Disability Code of Practice 2014](#) and [Equality Act 2010](#), and refers to curriculum-related expectations of governing boards set out in the Department for Education's [Governance Handbook](#). In addition, this policy acknowledges the requirements for promoting the learning and development of children set out in the [Early Years Foundation Stage \(EYFS\) statutory framework](#).

5. ROLES AND RESPONSIBILITIES

THE GOVERNING BOARD

The governing board will monitor the effectiveness of this policy and hold the headteacher to account for its implementation and will also ensure that:

- A robust framework is in place for setting curriculum priorities and aspirational targets.
- Enough teaching time is provided for pupils to cover the National Curriculum and other statutory requirements.
- Proper provision is made for pupils with different abilities and needs, including children with Special Educational Needs and Disabilities (SEND).
- The school implements the relevant statutory assessment arrangements.
- It participates actively in decision-making about the breadth and balance of the curriculum.
- It fulfils its role in processes to disapply pupils from all or part of the National Curriculum, where appropriate, and in any subsequent appeals.

HEADTEACHER

The headteacher is responsible for ensuring that this policy is adhered to, and that:

- All required elements of the Computing Curriculum, and additional provision which the school chooses to offer, have aims and objectives which reflect the aims of the school and indicate how the needs of individual pupils will be met.
- The amount of time provided for teaching the required elements of the curriculum is adequate and is reviewed by the governing board.
- Where appropriate, the individual needs of some pupils are met by permanent or temporary disapplication from all or part of the National Curriculum.
- They manage requests to withdraw children from non-statutory elements of the curriculum, where appropriate.
- The school's procedures for assessment meet all legal requirements.
- The governing board is fully involved in decision-making processes that relate to the breadth and balance of the curriculum.
- The governing board is advised on whole-school targets within the School Development Plan (SDP) in order to make informed decisions.
- Proper provision is in place for pupils with different abilities and needs including International New Arrivals (INA) and children with Special Educational Needs and Disabilities (SEND).

LEADERS OF LEARNING

Leaders of Learning in close liaison with the Senior Leadership Team (SLT) will ensure that the school curriculum is implemented in accordance with this policy by:

- Monitoring in line with the school's Monitoring and Assessment Timetable.
- Attending and disseminating relevant continuing professional development (CPD) courses.
- Devising and implementing a subject specific action plan in line with the school's SDP.
- Sharing effective practice.
- Supporting staff, including Newly Qualified Teachers (NQTs).
- Raising the profile of and championing their subject within school and the wider school community.
- Analysis of data.

INTENT, IMPLEMENTATION AND IMPACT

6. INTENT

St Mary's CE Primary School's Computing Curriculum is broad and ambitious, and designed to give all our pupils, particularly those that are disadvantaged and pupils with SEND, the knowledge and cultural capital they need to succeed in life.

Early years (see also early year's policy)

It is important in the foundation stage to give children a broad, play-based experience of IT and computing in a range of contexts, including off-computer activities and outdoor play.

Computing is not just about computers. Early years learning environments should feature IT scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities such as 'programming' each other using directional language to find toys/objects, creating artwork using digital drawing tools and controlling programmable toys.

Outdoor exploration is an important aspect and using digital recording devices such as video recorders, cameras and microphones can support children in developing communication skills. This is particularly beneficial for children who have English as an additional language.

By the end of key stage 1 pupils are taught to:

- understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions
- write and test simple programs
- use logical reasoning to predict the behaviour of simple programs
- organise, store, manipulate and retrieve data in a range of digital formats
- Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

By the end of key stage 2 pupils are taught to:

- design and write programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output; generate appropriate inputs and predicted outputs to test programs
- use logical reasoning to explain how a simple algorithm works and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the world-wide web; and the opportunities they offer for communication and collaboration
- describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely
- Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

7. IMPLEMENTATION

St Mary's CE Primary School's Computing Curriculum is designed in a way that allows pupils to transfer key knowledge to long-term memory; it is sequenced so that new knowledge and skills build on what has been taught before and towards defined end points. For further information refer to Teaching and Learning Policy, Assessment Policy, Marking and Feedback Policy and subject specific policies. Our key principles of implementation include:

- Teachers have expert knowledge of the subjects they teach
- Teachers present key concepts clearly and invite appropriate discussions
- Teachers check pupils' understanding effectively, identifying and correcting misunderstandings
- Teachers ensure that pupils embed key concepts in their long-term memory and apply them fluently
- Teachers enable pupils to transfer key knowledge to long-term memory, sequence the learning and ensure that it is building towards the defined end points
- Teachers use assessment to check pupils' understanding
- Teachers use assessment to help pupils embed and use knowledge fluently, develop their understanding, and not simply memorise disconnected facts.

These core principles are cornerstones of the school's continuing success:

HIGH EXPECTATIONS

The school, its teachers, governors, parents and other adults have high expectations of our pupils. This produces a consistently positive and respectful learning ethos in and outside the classroom through displays and the celebration of student work. The students are well behaved, fully engaged in their learning and are confident, respectful members of the school community.

PURPOSEFUL LEARNING JOURNEY

The school, teachers, governors and other adults view the school as the vehicle for each individual pupils' learning journey which is linked to real life resulting in all contributing to and making explicit links between each year group. As a result, pupils have a more holistic and integrated learning experience that excites and inspires them whilst ensuring they feel part of a learning community and their individual learning experiences makes increasing sense to them.

PLANNING

Lessons are planned using the National Curriculum and school's Computing Skills Progression objectives. Lesson plans for main sections of the curriculum (e.g. coding) are also available for teachers to use and adapt as necessary for their class.

A minority of children will have particular teaching and learning requirements which go beyond the provision for that age range and if not addressed, could create barriers to learning. This could include G&T children, those with SEN or those who have EAL. Teachers must take account of these requirements and plan, where necessary, to support individuals or groups of pupils to enable them to participate effectively in the curriculum and assessment activities. During any teaching activities, teachers should bear in mind that special arrangements could be made available to support individual pupils. This is in accordance with the school inclusion policy. These children should be identified and discussed at pupil progress meetings to ensure that appropriate provisions and/or interventions are effected.

TEACHING ASSISTANTS AND OTHER ADULTS

Teaching assistants are fully involved in the planning and delivery of teaching and learning, their roles are purposefully allocated. They take responsibility and pride in what they do. Pupils at all levels receive support, challenge and direction ensuring more progress is made in their learning. Support for pupils with SEND via EHCPs is graduated and needs driven, this focusses both on scaffolding learning and encouraging group and independent work.

GROUPING STRUCTURES

Teachers strategically group students in; friendship, mixed ability and ability groupings so that the students are more engaged, receive targeted help, support each other and make more rapid progress.

DIFFERENTIATION

Teachers and Teaching Assistants consciously and strategically plan the teaching and activities across the ability range whilst consistently monitoring progress. Intervention at the point of learning ensures the pupils are learning more precisely and are continually motivated and make more progress.

SPEAKING AND LISTENING

Teachers and teaching assistants are consciously and strategically emphasising speaking and listening through generating new vocabulary, explicit feedback, modelling, para-phrasing, encouraging extended responses, partner working and active listening. As a result, pupils rapidly become more articulate and confident in speaking, expanding their vocabulary and become more socially responsive.

HIGHER LEVEL/TECHNICAL VOCABULARY

Teachers and teaching assistants deliberately use higher level and technical vocabulary whilst ensure pupils understand the conceptions involved. As a result, students are more able to understand the curriculum content, extend their vocabulary and are more articulate in discussion.

PROBLEM SOLVING

Teachers and Teaching Assistants deliberately and consistently framing activities within a problem solving context, including challenging all pupils with greater depth opportunities, the acquisition of learning skills; such as enquiry, reasoning, resilience, resourcefulness and collaboration. As a result, pupils become more inquisitive and persistent, whilst understanding more and learning from both success and failure.

QUESTIONING

Teachers and Teaching Assistants carefully and responsibly utilise a range of questioning techniques and tactics e.g. wait time, are deliberately democratic, provide positive and concrete feedback, require more explanation, put the onus on students individually and collectively.

MARKING AND FEEDBACK

Teachers regularly assess progress through observations and evidence. Key objectives to be assessed are taken from the National Curriculum to assess computing each term. The school uses the Bolton SICT 'I can' statements as a guide when assessing pupils. Each pupil's attainment is then record on the School Tracker Online every half term. Assessing computing is an integral part of teaching & learning and key to good practice.

Assessment should be process orientated - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of computing concepts. As assessment is part of the learning process, it is essential that pupils are closely involved. Assessment can be broken down into;

- Formative assessments are carried out during and following short focused tasks and activities. They provide pupils and teaching staff the opportunity to reflect on their learning in the context of the agreed success criteria. This feeds into planning for the next lesson or activity.
- Summative assessment should review pupils' ability and provide a best fit 'level'. Independent tasks provide a number of opportunities and scope for pupils to demonstrate their capability throughout the term. There should be an opportunity for pupil review and identification of next steps. Summative assessment should be recorded for all pupils – showing whether the pupils have met, exceeded or not achieved the learning objectives.

We assess the children's work in computing by making informal judgments as we observe the children during lessons. Once the children complete a unit of work, we make a summary judgment of the work for each pupil as to whether they have yet to obtain, obtained or exceeded the expectations of the unit.

The children's work is saved on the school network and the school's Purple Mash account. Other work may be printed and filed within the subject from which the task was set.

LITERACY AND MATHS

Literacy and Maths are used to promote deeper subject specific learning and allow pupils greater application of skills especially in terms of problem solving.

EARLY YEARS FOUNDATION STAGE

All areas of learning and development are important and inter-connected. Three areas are particularly crucial for igniting children's curiosity and for building their capacity to learn, form relationships and thrive.

SPECIFIC AREA:

- Knowledge of the world (Computing – comes under this area)

We deliver learning for all of the areas through purposeful play and learning experiences, with a balance of adult-led and child-initiated activities. At St Mary's School, we recognise that children learn and develop in different ways and at different rates. We value all areas of learning and development equally and understand that they are inter connected and ensure:

CREATIVITY AND CRITICAL THINKING

Children should be given opportunity to be creative through all areas of Computing. At St Mary's, we can support children's thinking and help them to make connections by showing genuine interest, offering encouragement, clarifying ideas and asking open questions. Children can access resources freely and are allowed to move them around the classroom to extend their learning.

- Focusses on getting the basic skills right early, with high emphasis placed on communication, early number, phonics, vocabulary skills Personal, Social and Emotional Development (PSED).
- Focusses on ensuring pupils are well rounded, thoughtful and able to work in a variety of group and individual situations with thoughtfulness and resilience.
- Focusses on building happy, confident learners.

8. INCLUSION

Teachers set high expectations for all pupils. They will use appropriate assessment to set ambitious targets and plan challenging work for all groups, including:

- More able pupils
- Pupils with low prior attainment
- Pupils from disadvantaged backgrounds
- Pupils with SEN
- Pupils with English as an additional language (EAL).

Teachers will plan lessons so that pupils with Special Education Needs and Disabilities (SEND) can study every National Curriculum subject, wherever possible, and ensure that there are no barriers to every pupil achieving. Teachers will also take account of the needs of pupils whose first language is not English. Lessons will be planned so that teaching opportunities help pupils to develop their English, and to support pupils to take part in all subjects. Further information can be found in our Statement of Equality Information and objectives, and in our SEND Policy and information report.

9. MONITORING ARRANGEMENTS

Governors monitor coverage of National Curriculum subjects and compliance with other statutory requirements through:

- The Board of Governors Curriculum Committee is responsible for monitoring the way the school curriculum is implemented – agenda led and monitored to address each subject area including Computing.
- Named Governors with responsibility for Computing - governors liaise with the subject leaders and monitor closely the way the school teaches Computing.
- The head teacher is responsible for the day-to-day organisation of the Computing curriculum.
- Leaders of Learning monitor the way that their subject is taught throughout the school through:
 - Lesson Observations;
 - Learning Walks;
 - Pupil Voice;
 - Analysis of data;
 - Planning Scrutinies;

- Work Scrutinies.

In addition, Leaders of Learning have responsibility for monitoring the way in which resources are stored and managed. Leaders of Learning report back to the Curriculum Subcommittee verbally and through written formats, staff and SLT reporting on standards and monitoring activities.

10. IMPACT OF THE SCHOOL'S CURRICULUM

The school implements a broad balanced and enriched Computing curriculum as a result:

- Pupils develop detailed knowledge and skills across the Computing curriculum and, as a result, achieve well. This is reflected in results from national test which exceed government expectations.
- Precision in planning, we know that the Computing curriculum is covered in the required depth exemplified within the statutory and non-statutory guidance of the national curriculum.
- Pupils have the opportunities to regularly revisit concepts and link ideas together.
- High quality programs are used; pupils have a real love of learning.
- Learning begins from two years old. Pupils have access to a range of resources.
- Development of the whole child and gaining a sense of awe and wonder, pupils are happy engaged learners eager to share their learning with adults, family and class peers.
- Strong emphasis on revision of oracy and basic skills pupils' standards are high and pupils are exceptionally well prepared for their next stage of learning.
- High focus on developing specific subject knowledge, as well as the skills in each subject, pupil's progression through the Key Stages is ensured and readily exemplified; through display and case studies, performance and demonstrable achievements.
- Focus on providing opportunities of working with children beyond their own school, sex, religion and experience pupils are able to mix, collaborate and work appreciate the views of others.
- A curriculum focusing on technology in the wider world: pupils to leave St Mary's CE Primary School able to integrate into modern British Society. Many pupils take on roles with added responsibility, such as E-Safety Champion, at school and beyond.
- Active engagement with parents, the curriculum goes beyond the classroom and promotes home study and research, parents are engaged and have ownership of the school and see it as part of the community.
- The computing curriculum being fully inclusive for all, pupils have time and opportunities to work alongside their class peers who may have learning and physical needs, this creates a strong sense of care and inclusivity.
- Lessons are planned around pupil's interests and questions, pupils are actively engaged in their own learning and eager to investigate beyond the classroom. (See Exam and Assessment Outcomes).

11. LINKS WITH OTHER POLICIES

This policy links to the following policies and procedures:

• EYFS Policy • Assessment Policy • Marking and Feedback Policy • SEND Policy, SEND Information Report, SEND Offer • Equality Information and Objectives • Computing Policy • English as and Additional Language (EAL) Policy • Early Years Policy • Online Safety Policy	• High Expectations Policy • International New Arrivals (INAS) Policy • PHSCE/SMCE Policy SEND Policy • Teaching And Learning Policy • Writing Policy • Reading Policy • Mathematics Policy • Most Able Policy • Sexting Policy • Artificial Intelligence Policy
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